

**WHAT IS CLAIMED IS:**

1. An in-plane switching mode liquid crystal display device comprising:

first and second substrates;

5 a plurality of gate and data bus lines defining pixel regions and arranged on said first substrate;

a common line formed with said gate bus line;

10 a plurality of thin film transistors formed at respective crossing areas of said gate and data bus lines, gate electrodes of said transistors being connected to said gate bus lines, respectively;

a gate insulator having a contact hole on said gate electrodes;

15 a transparent first metal layer including a plurality of first electrodes on said gate insulator;

a passivation layer having a contact hole on said transparent first metal layer; and

20 a transparent second metal layer including a plurality of second electrodes on said passivation layer, said second electrodes producing plane electric fields together with said first electrodes.

2. The in-plane switching mode liquid crystal display device according to claim 1,

25 wherein said common line and said transparent first metal layer form a first storage capacitor, and said transparent first metal layer and said transparent second metal layer form a second storage capacitor.

3. The in-plane switching mode liquid crystal display device according to claim 1,

wherein each of said thin film transistors comprises a semiconductor layer on said gate insulator, a channel layer on said semiconductor layer, and source and drain electrodes on said channel layer, one of said source and drain electrodes being connected to said data bus lines.

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4. The in-plane switching mode liquid crystal display device according to claim 1, wherein said transparent first electrodes include data electrodes and said transparent second electrodes include common electrodes.

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5. The in-plane switching mode liquid crystal display device according to claim 1, wherein said transparent first and second metal layers include indium tin oxide.

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6. The in-plane switching mode liquid crystal display device according to claim 1, further comprising a first alignment layer over said first substrate.

7. The in-plane switching mode liquid crystal display device according to claim 6, wherein said first alignment layer includes one of polyimide, polyamide, and photosensitive material.

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8. The in-plane switching mode liquid crystal display device according to claim 7, wherein said photosensitive material is selected from the group consisting of polyvinylcinnamate and polysiloxanecinnamate.

9. The in-plane switching mode liquid crystal display device according to claim 1,

further comprising:

a black matrix for preventing light from leaking around said thin film transistor, said gate bus line, and data bus line;

a color filter layer on said second substrate; and

a liquid crystal layer between said first and second substrates.

10. The in-plane switching mode liquid crystal display device according to claim 9, further comprising an overcoat layer on said color filter layer.

11. The in-plane switching mode liquid crystal display device according to claim 1, further comprising a second alignment layer on said second substrate.

12. The in-plane switching mode liquid crystal display device according to claim 11, wherein said second alignment layer includes one of polyimide, polyamide, and photosensitive material.

13. The in-plane switching mode liquid crystal display device according to claim 12, wherein said photosensitive material is selected from the group consisting of polyvinylcinnamate and polysiloxanecinnamate.

14. An in-plane switching mode liquid crystal display device comprising:  
first and second substrates;  
a plurality of gate and data bus lines defining pixel regions and arranged on said first substrate;

a common line formed with said gate bus line;

a plurality of thin film transistors formed at respective crossing areas of said gate and data bus lines, gate electrodes of said transistors being connected to said gate bus lines, respectively;

5 a gate insulator having a contact hole on said gate electrodes;

a transparent first metal layer including a plurality of first electrodes and a transparent second metal layer including a plurality of second electrodes on said gate insulator, said second electrodes producing plane electric fields together with said first electrodes on said gate insulator; and

10 a passivation layer on said common line and said thin film transistors.

15 15. The in-plane switching mode liquid crystal display device according to claim 14, wherein said common line and said transparent first metal layer form a first storage capacitor, and said transparent first metal layer and said transparent second metal layer form a second storage capacitor.

20 16. The in-plane switching mode liquid crystal display device according to claim 14, wherein each of said thin film transistors comprises a semiconductor layer on said gate insulator, a channel layer on said semiconductor layer, and source and drain electrodes on said channel layer, one of said source and drain electrodes being connected to said data bus lines.

17. The in-plane switching mode liquid crystal display device according to claim 14, wherein said transparent first electrodes include data electrodes and said transparent second

electrodes include common electrodes.

18. The in-plane switching mode liquid crystal display device according to claim 14,  
wherein said transparent first and second metal layers include indium tin oxide.

19. The in-plane switching mode liquid crystal display device according to claim 14,  
further comprising a first alignment layer over said first substrate.

20. The in-plane switching mode liquid crystal display device according to claim 19,  
wherein said first alignment layer includes one of polyimide, polyamide, and photosensitive  
material.

21. The in-plane switching mode liquid crystal display device according to claim 20,  
wherein said photosensitive material is selected from the group consisting of  
polyvinylcinnamate and polysiloxanecinnamate.

22. The in-plane switching mode liquid crystal display device according to claim 14,  
further comprising:

a black matrix for preventing light from leaking around said thin film transistor, said  
gate bus line, and data bus line;

a color filter layer on said second substrate; and

a liquid crystal layer between said first and second substrates.

23. The in-plane switching mode liquid crystal display device according to claim 22,

further comprising an overcoat layer on said color filter layer.

24. The in-plane switching mode liquid crystal display device according to claim 14,  
further comprising a second alignment layer on said second substrate.

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25. The in-plane switching mode liquid crystal display device according to claim 24,  
wherein said second alignment layer includes one of polyimide, polyamide, and  
photosensitive material.

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26. The in-plane switching mode liquid crystal display device according to claim 25,  
wherein said photosensitive material is selected from the group consisting of  
polyvinylcinnamate and polysiloxanecinnamate.

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27. The in-plane switching mode liquid crystal display device according to claim 14,  
wherein said passivation layer is substantially only on the thin film transistors and the  
common line.

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28. A method of forming an in-plane switching mode liquid crystal display device, the  
method comprising the steps of:  
forming first and second substrates;  
forming a plurality of gate and data bus lines defining pixel regions and arranged on said  
first substrate;  
forming a common line formed with said gate bus line;  
forming a plurality of thin film transistors formed at respective crossing areas of said

gate and data bus lines, gate electrodes of said transistors being connected to said gate bus lines, respectively;

forming a gate insulator having a contact hole on said gate electrodes;

forming a transparent first metal layer including a plurality of first electrodes on said gate insulator;

forming passivation layer having a contact hole on said transparent first metal layer; and

forming transparent second metal layer including a plurality of second electrodes on said passivation layer, said second electrodes producing plane electric fields together with said first electrodes.

29. The method according to claim 28, wherein said common line and said transparent first metal layer form a first storage capacitor, and said transparent first metal layer and said transparent second metal layer form a second storage capacitor.

30. The method according to claim 28, wherein each of said thin film transistors comprises a semiconductor layer on said gate insulator, a channel layer on said semiconductor layer, and source and drain electrodes on said channel layer, one of said source and drain electrodes being connected to said data bus lines.

31. The method according to claim 28, wherein said transparent first electrodes include data electrodes and said transparent second electrodes include common electrodes.

32. The method according to claim 28, wherein said transparent first and second metal layers include indium tin oxide.

33. The method according to claim 28, further comprising the step of forming a first alignment layer over said first substrate.

34. The method according to claim 33, wherein said first alignment layer includes one of polyimide, polyamide, and photosensitive material.

35. The method according to claim 34, wherein said photosensitive material is selected from the group consisting of polyvinylcinnamate and polysiloxanecinnamate.

36. The method according to claim 1, further comprising the steps of:  
forming a black matrix for preventing light from leaking around said thin film transistor, said gate bus line, and data bus line;  
forming a color filter layer on said second substrate; and  
forming a liquid crystal layer between said first and second substrates.

37. The method according to claim 36, further comprising the step of forming an overcoat layer on said color filter layer.

38. The method according to claim 28, further comprising the step of forming a second alignment layer on said second substrate.

39. The method according to claim 38, wherein said second alignment layer includes one of polyimide, polyamide, and photosensitive material.



40. The method according to claim 39, wherein said photosensitive material is selected from the group consisting of polyvinylcinnamate and polysiloxanecinnamate.

41. A method of forming an in-plane switching mode liquid crystal display device, the method comprising the steps of:

forming first and second substrates;

forming a plurality of gate and data bus lines defining pixel regions and arranged on said first substrate;

forming a common line formed with said gate bus line;

forming a plurality of thin film transistors formed at respective crossing areas of said gate and data bus lines, gate electrodes of said transistors being connected to said gate bus lines, respectively;

forming a gate insulator having a contact hole on said gate electrodes;

forming a transparent first metal layer including a plurality of first electrodes and a transparent second metal layer including a plurality of second electrodes on said gate insulator, said second electrodes producing plane electric fields together with said first electrodes on said gate insulator; and

forming a passivation layer on said common line and said thin film transistors.